



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,809	07/23/2001	Mayumi Tomikawa	522.1921D3	6031
21171	7590	03/01/2007		
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER DEJONG, ERIC S	
			ART UNIT 1631	PAPER NUMBER
			MAIL DATE 03/01/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

09/909,809

Applicant(s)

TOMIKAWA ET AL.

Examiner

Eric S. DeJong

Art Unit

1631

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 15 February 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: see continuation sheet. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 16, 17 and 23-25.  
Claim(s) withdrawn from consideration: 26.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: see continuation sheet.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

*John S. Brusca* 28 February 2007  
JOHN S. BRUSCA, PH.D.  
PRIMARY EXAMINER  
EDJ *EDJ*

## Continuation of Item 3. NOTE:

The proposed amendments, filed 02/15/2007, contain significant amendments to the instant claims that would alter both the scope of the claimed invention and introduce newly presented limitations that would require further consideration and/or search, and therefore will not be entered. In the proposed claim amendments, the preamble of independent claims 16, 23, and 24 have been amended to recite additional process steps and, if entered, it is unclear if said steps (see for example lines 1-16 of instant claim 16) would limit the instantly claimed process or, alternatively, read only on intended use and therefore not limit the process steps recited in the body of said claims (see for example lines 17-59 of proposed claim 16). Further, the recited process steps drawn to dividing a structure into a plurality of subsets (see for example lines 17 and 18 of proposed claim 16), determining a correspondence between a first and second point set (see for example lines 19-22 of proposed claim 16), generating tree a first tree structure (see for example lines 23-25 of proposed claim 16), pruning a second tree structure (see for example lines 26-28 of proposed claim 16), determining whether the first point set and second point set have a same attribute (see for example, lines 29-34 of proposed claim 16), calculating a root mean square distance (RMSD) value (see for example lines 35-47 of proposed claim 16), determining whether an RMSD value is less than or equal to a predetermined threshold value (see for example lines 48-51 of proposed claim 16), and determining a length of a longest common subsequence (LCS) (see for example, lines 52-55 of proposed claim 16) contain significant amendments that, if entered, would require further consideration. Therefore, for the reasons provided above, the proposed after Final amendments will not be entered.

## Continuation of Item 11. NOTE:

The rejections set forth in the Office action, mailed 11/22/2006, are maintained for reasons of record.

Claims 16, 17, and 23-25 are rejected under 35 § USC 112, 2<sup>nd</sup> paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regards as the invention.

Applicants argue that the proposed independent claims have been amended to include the definition of the r.m.s.d. value. Applicants site page 4, line 27 through page 5, line 23 as support.

In response, it is reiterated from the previous office action that the recited term RMSD recited is used by claims to mean "root mean square distance", while the accepted meaning is "root mean square deviation" (see page 2, line 12 through page 3, line 9 of the Office action mailed 11/22/2006). It is acknowledged that the proposed claims define the term r.m.s.d. by an equation for the statistical quantity of a root mean square deviation. However, providing a statistical quantity of a root mean square deviation for a given plurality of coordinate point set does not result in the determination of a distance, per se. Rather, in the instant case the statistical quantity of a root mean square quantifies an overall deviation from a standard or averaged coordinate point set. This further causes significant confusion in the instantly claimed process because the proposed claims requires the determination of a distance, per se, between elements of a first point set and a second point set (see for example lines 37 and 38 of proposed claim 16). The result provided by the determination of the instantly recited root mean square deviation performed on a given plurality of point sets does not result in a distance, per se.

Applicants further argue that the terminologies "wherein each point of the first point set and the second point set is expressed by the three-dimensional coordinates and the coordinates are analyzed to determined the correspondence" and "wherein the three structures are generated by successively giving correspondence to an element constituting the sets" have been added to each independent claim to more clearly show that the point sets are expressed by three dimensional structure coordinates wherein possible correspondence is described by a tree structure created by successively giving correspondence to the element constituting the sets.

In response, it is noted that the proposed amendments to the instant claims do not clarify the issues set forth in the previous Office action (see page 6, line 1 though page 7, line 3 of the Office action mailed 11/22/2006). In the instantly proposed claims, the meaning and scope of the limitation of "the first point set and second point set is expressed by the three dimensional coordinates" is unclear because it cannot be determined if the recited first and second point sets are defined as a set of three dimensional coordinates or alternatively are related to, but not defined as, a set of coordinated. Further the proposed limitation of "successively giving correspondence to an element constituting the set" is unclear because it cannot be determined what acts or process steps this limitation is intended to encompass. This further renders the process steps of generating a first and second tree structure indefinite because the generation of said tree structures is dependent upon the meaning of the recited limitation "successively giving correspondence to an element constituting the sets".

Applicants further argue that an example of pruning is illustrated in FIG 18 and described on page 33, line 10 through page 37, line 25 of the specification and submits that the process of "pruning" the trees is known to those of skill in the art.

In response, it noted that the exemplary embodiments and teachings of the specification are not imported into the instant claims. Neither the instant claims nor the instant specification provide a definition that would limit the scope of the terminology recited in the proposed claims.

Applicants further argue that the proposed claims have been amended to clarify the terminology of "a character sequence expressing".

In response, it is reiterated from the previous Office action mailed 11/22/2006 that the recited limitation of "a character sequence expressing the input amino acid sequence" (see for example lines 52-55 of proposed claim 16) renders the claim indefinite (see page 6, line 1 through page 7, line 3 of the Office action mailed 11/22/2006). It remains unclear in the proposed claims if "a character sequence expressing" an amino acid sequence is directed to a DNA sequence that expresses an amino acid product in the context of biological transcription and translation, or, alternatively, of a "character sequence expressing" an amino acid sequence is directed to a three dimensional structure of said amino acid sequence. Further, "the input amino acid sequence" as recited in the proposed claims lacks antecedent basis.

Claims 16, 17, and 23 are provisionally rejected on the grounds of obviousness-type double patenting over claim 13 of copending application 09/910,071.

Applicants traverse the rejection and request reconsideration. However, it is noted that applicants have not presented any arguments or grounds to support the traversal of the instant rejection. Therefore the rejection is maintained for reasons of record.